



**U.S. Department of Energy
Grand Junction Office**

Long-Term Surveillance and Maintenance Program Plan

June 1999



**U.S. Department
of Energy**

GRAND JUNCTION OFFICE

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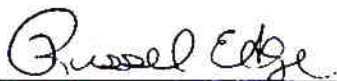
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Long-Term Surveillance and Monitoring Program Program Plan

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Acronyms

AEC	U.S. Atomic Energy Commission
AL	Albuquerque Operations Office
CEER	Center for Energy and Environmental Research
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
D&D	Defense Decontamination and Decommissioning Program
DOE	U.S. Department of Energy
EM-40	Office of Environmental Restoration
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration
FR	Federal Register
FUSRAP	Formerly Utilized Sites Remedial Action Program
FY	fiscal year
GJO	Grand Junction Office
HQ	Headquarters
LTRM	Long-Term Radon Management
LTSM	Long-Term Surveillance and Maintenance
LTSP	Long-Term Surveillance Plan
NEPA	National Environmental Policy Act
NRC	U.S. Nuclear Regulatory Commission
NWPA	Nuclear Waste Policy Act
PBS	project baseline summary
RCRA	Resource Conservation and Recovery Act
UMTRCA	Uranium Mill Tailings Radiation Control Act
USACE	U.S. Army Corps of Engineers
U.S.C.	United States Code

1.0 Introduction to the Long-Term Surveillance and Maintenance Program Plan

The Long-Term Surveillance and Maintenance (LTSM) Program has operated at the U.S. Department of Energy (DOE) Grand Junction Office (GJO) since its inception in 1988. This plan establishes goals, strategies, and procedures adopted by the LTSM Program to achieve program objectives. It also serves as a reference that defines the LTSM Program environment and identifies program source information.

The LTSM Program planning process was designed to address the following:

- Define the mission, objectives, and goals of the LTSM Program;
- Ensure consideration of stakeholder input for program planning as well as issue identification and resolution;
- Confirm program priorities;
- Define a system for tracking the progress of LTSM Program activities by applying agreed-upon performance measures and end-state definitions to assess activity status;
- Define strategies to achieve objectives and goals; and
- Generate a comprehensive program reference that summarizes relevant program information and directs the reader to detailed source data.

The remainder of this document describes how the LTSM Program fulfills its mission. Section 2 contains a description of the LTSM Program. Key topics include objectives, responsibilities, and resource requirements. Section 3 summarizes LTSM Program Operations. Information about program risks is presented in Section 4.

Strategies to achieve goals are presented in Section 5. Section 6 contains information on cost and schedule controls. References are contained in Section 7.

This plan includes by reference all source data upon which the plan is predicated, including DOE and DOE contractor administrative procedures and policy guidance; current definitions of work scope, schedule, and budget; and general and site-specific activity plans ([Appendix A](#)). [Appendix B](#) lists applicable laws and regulations. [Appendix C](#) contains historical and projected spending and the most recent project baseline summary. LTSM Program sites are described in [Appendix D](#). The LTSM Program Public Participation Plan is presented in [Appendix E](#). The process for transferring responsibility for a site to the LTSM Program is described in [Appendix F](#). A site inspection checklist is presented in [Appendix G](#).

The LTSM Program Plan will be reviewed and revised as necessary.

2.0 Description of the LTSM Program

The LTSM Program provides the expertise and resources necessary to manage low-level radioactive material disposal or impoundment sites after remedial action is complete. These activities and functions are specifically required under the environmental restoration authority for a given site or are necessary to maintain compliance with applicable environmental protection regulations and DOE policy.

2.1 LTSM Program Mission and Objectives

Mission: Fulfill DOE's responsibility to implement all activities necessary to ensure regulatory compliance and to protect the public and the environment from long-lived wastes associated with the nation's nuclear energy, weapons, and research activities.

Objectives:

- Protect the public and the environment.
- Maintain site records and information so that future custodians can continue to provide effective stewardship.
- Provide a resource to manage long-term disposal and storage sites.
- Maintain compliance with applicable regulations.
- Serve as a source of stewardship information and expertise for other entities with long-term care responsibilities.
- Provide services and products within approved schedule and budget limits.
- Provide an outreach and information dissemination resource to the public to maintain public trust in local LTSM Program sites.

2.2 LTSM Program Charter

The LTSM Program was established in 1988 by DOE-Headquarters (HQ) to provide long-term care for disposal sites containing low-level radioactive waste (DOE 1988). Effective January 1, 1989, DOE-GJO was designated as the program office for "disposal site long-term surveillance and maintenance." This assignment of responsibility was reconfirmed on three occasions (DOE 1992, 1996, 1998b).

2.3 LTSM Program Scope

The LTSM Program managed 25 disposal sites at the end of fiscal year (FY) 1998. The number of sites and their proposed transfer schedules are presented in [Table 2-1](#). Site locations are described in Appendix D.

Table 2-1. Summary of Sites in LTSM Program Custody (May 1999)

Program/Site	1998	1999	2000	2001	2002	2003	2004	2005	2006
UMTRCA Title I	19	19	19	19	19	19	19	19	19
UMTRCA Title II	2	2	9	14	16	16	16	16	16
NWPA Section 151(b) ^a			TBD	TBD	TBD	TBD	TBD	TBD	TBD
NWPA Section 151©	1	1	1	1	1	1	1	1	1
D&D	3	3	3	3	4	4	4	4	4 ^b
Long-Term Radon Management Project				1	1	1	1	1	1
Monticello, Utah					1	1	1	1	1
Weldon Spring, Missouri					1	1	1	1	1
Nevada Offsite Projects (anticipated)				1	4	6	7	8	8
FUSRAP ^c				TBD	TBD	TBD	TBD	TBD	TBD
Pinellas, Florida					1	1	1	1	1
CEER		1	1	1	1	1	1	1	1
Total	25	26	33	40	49	51	52	53	53

^aSites remediated under this program may be transferred to the LTSM Program. The number of sites and the schedule for site transfer is unknown.

^bThe LTSM agreement for the Hallam, Nebraska, decommissioned reactor site requires stewardship through 2005. The need for continued stewardship will be evaluated at that time.

^cFUSRAP sites that require long-term stewardship will be transferred to the LTSM Program starting in 2001.

Key: CEER = Center for Energy and Environmental Research; D&D = Defense Decontamination and Decommissioning Program; FUSRAP = Formerly Utilized Sites Remedial Action Program; NWPA = Nuclear Waste Policy Act; TBD = To Be Determined; UMTRCA = Uranium Mill Tailings Radiation Control Act

2.4 Regulatory Basis for LTSM Program Activities

LTSM Program sites were remediated under several different environmental restoration programs. Sites remediated under the Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) must be cared for in accordance with the terms of a U.S. Nuclear Regulatory Commission (NRC) general license. Authorities for other remedial action programs may not have included a statutory requirement for long-term stewardship of remediated sites. However, DOE typically retains ownership and/or control of all of these sites and the low-level radioactive materials impounded on them. DOE orders and Federal, State, and local environmental

protection regulations require DOE, as owner, to ensure protection of public health and safety and the environment. The Atomic Energy Act of 1954 establishes that DOE is responsible for protecting the public and the environment from hazards associated with radioactive materials under its control. Consequently, DOE will provide LTSM services for these sites to comply with environmental regulations and DOE policy. Primary regulations for LTSM Program sites are summarized in [Table 2-2](#) and described below. These primary regulations in turn invoke additional Federal, State, and local regulations (e.g., the Clean Water Act) at individual sites with which the program will comply. Regulations applicable to a given site are cited fully in site documentation.

Table 2-2. Regulatory Requirements for LTSM Program Sites

Program/Site	Number of Sites as of 1999	Agency Promulgating Primary Regulations	Primary Regulations
UMTRCA Title I	19	NRC, States, Tribes	40 CFR 192, 10 CFR 40.27
UMTRCA Title II	2	NRC, States, Tribes	40 CFR 192, 10 CFR 40.28
FUSRAP	0	EPA	CERCLA
Monticello, Utah, and Weldon Spring, Missouri	0	EPA, States	CERCLA
D&D	3	DOE	DOE orders
NWPA(b), ^a ©	1	NRC	DOE orders
Pinellas, Florida	0	EPA	RCRA
Nevada Offsite Projects ^a	0	DOE	DOE orders
CEER	0	DOE	DOE orders

^aSites remediated under this program may be assigned to the LTSM Program for long-term surveillance and Maintenance.

All LTSM Program sites are stable, and routine activities at the sites are categorically excluded from National Environmental Policy Act (NEPA) requirements (DOE 1994b). Routine activities will not adversely affect the environment. If nonroutine activities are required, LTSM Program personnel will evaluate whether those activities are subject to the requirements of NEPA and other regulations. Routine and nonroutine activities are described in Section 3.

Radiation protection activities at sites regulated by DOE (i.e., all sites except the UMTRCA sites) are conducted under Title 10, *Code of Federal Regulations* Part 835 (10 CFR 835), “Occupational Radiation Protection,” and DOE Order 5400.5, “Radiation Protection of the Public and the Environment.”¹ These regulations impose radiation exposure limits on DOE for protection of workers, the public, and the environment. Radiation protection activities will be implemented by an entity that complies with the qualifications prescribed in those regulations.

¹The DOE orders system is currently being revised. DOE Order 5400.5 is expected to be codified at 10 CFR 834; other DOE orders cited in this plan will be superseded by new orders with three-character identifiers. These changes will be reflected in subsequent revisions to this plan. The contract for the current DOE-GJO contractor and the Quality Assurance Program Plan mandate compliance with the older, four-character orders.

The LTSM Program will ensure compliance with DOE Order 5400.1, "General Environmental Protection Program." This order stipulates that DOE will comply with applicable Federal, State, and local environmental protection laws and regulations, Executive orders, and internal DOE policies.

Compliance with 10 CFR 835 and DOE Orders 5400.1 and 5400.5 can only be verified through routine surveillance and monitoring.

UMTRCA Sites—As stipulated under UMTRCA, DOE assumed responsibility for long-term care of all 19 UMTRCA Title I sites as those sites were accepted by NRC under the general license issued to DOE. The program has taken custody of two UMTRCA Title II sites and expects ultimately to take custody of 26 sites. DOE is specifically required under UMTRCA to provide long-term stewardship for disposal sites after completion of remedial action or reclamation activities, provided a host State does not exercise its option to become long-term custodian of a Title II site. Requirements for these activities are defined under NRC regulations at 10 CFR 40.27, "General License for Custody and Long-Term Care of Residual Radioactive Material Disposal Sites," and 10 CFR 40.28, "General License for Custody and Long-Term Care of Uranium and Thorium Byproduct Materials Disposal Sites."

UMTRCA sites were cleaned up to standards cited in 40 CFR 192. Four UMTRCA Title II sites were remediated in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Other regulations may be applicable to specific sites, including the Toxic Substances Control Act and the Resource Conservation and Recovery Act (RCRA).

CERCLA Sites—In addition to the four UMTRCA Title II sites that may become the responsibility of the LTSM Program, the program will assume responsibility for two DOE sites remediated under CERCLA. These sites can not be released for unrestricted use and unlimited exposure because contaminants that exceed regulatory limits, including low-level radioactive materials, will remain on the sites. As the responsible party at these two sites, DOE is responsible under CERCLA for ensuring protection of human health and the environment at these locations. These locations require CERCLA 5-year reviews that evaluate whether the conditions at the site continue to be protective of human health and the environment. More stringent long-term care responsibilities may be negotiated with EPA or the State for a specific site. For example, the Monticello, Utah, long-term surveillance plan stipulates weekly inspections of surface features to ensure that institutional controls remain effective.

Defense Decontamination and Decommissioning Program Sites—The LTSM Program conducts stewardship activities at three sites remediated under the Defense Decontamination and Decommissioning (D&D) Program. A fourth site, the DOE-GJO facility, will become the responsibility of the LTSM Program in 2002.

The Hallam, Nebraska, decommissioned entombed reactor site is included in the LTSM Program on the basis of an agreement between the Nebraska Public Power District and the U.S. Atomic Energy Commission (AEC). That agreement stipulates that DOE (as successor agency to AEC) will conduct surveillance activities at the site until 2005. The land on which the reactor was built is owned by the utility and leased to DOE. DOE holds title to the contaminated materials contained in the decommissioned reactor structure. DOE is responsible for ensuring conformance

with 10 CFR 835 and DOE Orders 5400.1 and 5400.5. After 2005, site conditions will be evaluated to determine if LTSM activities must continue. Ongoing LTSM activities may include institutional controls monitoring.

Activities at the Piqua, Ohio, entombed reactor site are governed by an agreement between the city of Piqua and AEC, which stipulates that DOE will continue inspections at this location until radioactivity has decreased to levels specified in 10 CFR 20. DOE holds title to the land and the contaminated materials at this location. Therefore, DOE is responsible for ensuring conformance with 10 CFR 835 and DOE Orders 5400.1 and 5400.5.

Site A/Plot M is located in the Palos Forest Preserve near Chicago, Illinois. Buried radiologically contaminated wastes result from AEC activities at the site. Therefore, DOE is responsible for ensuring conformance with 10 CFR 835 and DOE Orders 5400.1 and 5400.5.

Center for Energy and Environmental Research—The Boiling Nuclear Superheater reactor facility was decommissioned in 1969 and 1970. DOE holds title to the contaminated materials contained in the decommissioned reactor structure. DOE is responsible for ensuring conformance with 10 CFR 835 and DOE Orders 5400.1 and 5400.5. LTSM activities are expected to continue through at least 2136.

Resource Conservation and Recovery Act Site—The Pinellas Science, Technology, and Research Center in Largo, Florida, was remediated under RCRA. Regulated concentrations of volatile organic compounds have been identified in site groundwater, and arsenic contamination exists in the soil at one solid-waste management unit. If remediation can not reduce these contaminants to levels below regulatory limits, postclosure stewardship will be required to maintain institutional controls until contaminant levels are no longer hazardous.

Nuclear Waste Policy Act Sites—The LTSM Program has assumed stewardship responsibilities for one site under the authority of the Nuclear Waste Policy Act (NWPA), Section 151(c). Postclosure stewardship activities are not specified in NWPA. However, in accordance with DOE Order 5400.1, site materials must not cause applicable regulatory limits to be exceeded. Also, the low-level radioactive materials must not cause exposures to workers or the public to exceed levels specified in 10 CFR 835 and DOE Order 5400.5.

Nevada Offsite Projects Sites—the DOE Nevada Operations Office has monitored environmental conditions at two locations in Nevada, two in Colorado, two in New Mexico, and one each in Mississippi and Alaska. Nuclear explosive tests were performed at these sites for various purposes, including stimulating natural gas production and cataloging seismic detonation signatures. Responsibility for monitoring these sites is expected to be transferred to the LTSM Program beginning in 2001. Long-term monitoring will consist primarily of sampling groundwater for radionuclides. These activities are required under DOE Orders 5400.1 and 5400.5.

Formerly Utilized Sites Remedial Action Program Sites—These sites were involved with the nation's early atomic energy program. Currently, the U.S. Army Corps of Engineers (USACE) is responsible for remedial action at FUSRAP sites. The sites were remediated in accordance with CERCLA regulations. The sites will be transferred to the custody of the LTSM Program

beginning in 2001. DOE is responsible for ensuring conformance with 10 CFR 835, DOE Order 5400.5, and CERCLA. Consequently, DOE will conduct periodic inspections at FUSRAP locations that require postclosure monitoring. The LTSM Program will assume site inspection responsibility 2 years after site closure. USACE will conduct the initial site inspections and 5-year reviews, where applicable.

2.5 Stewardship Program Functions

Stewards are defined as individuals or organizations responsible for ensuring that closed sites remain protective of human health and safety and the environment, and that the sites comply with applicable laws and regulations.

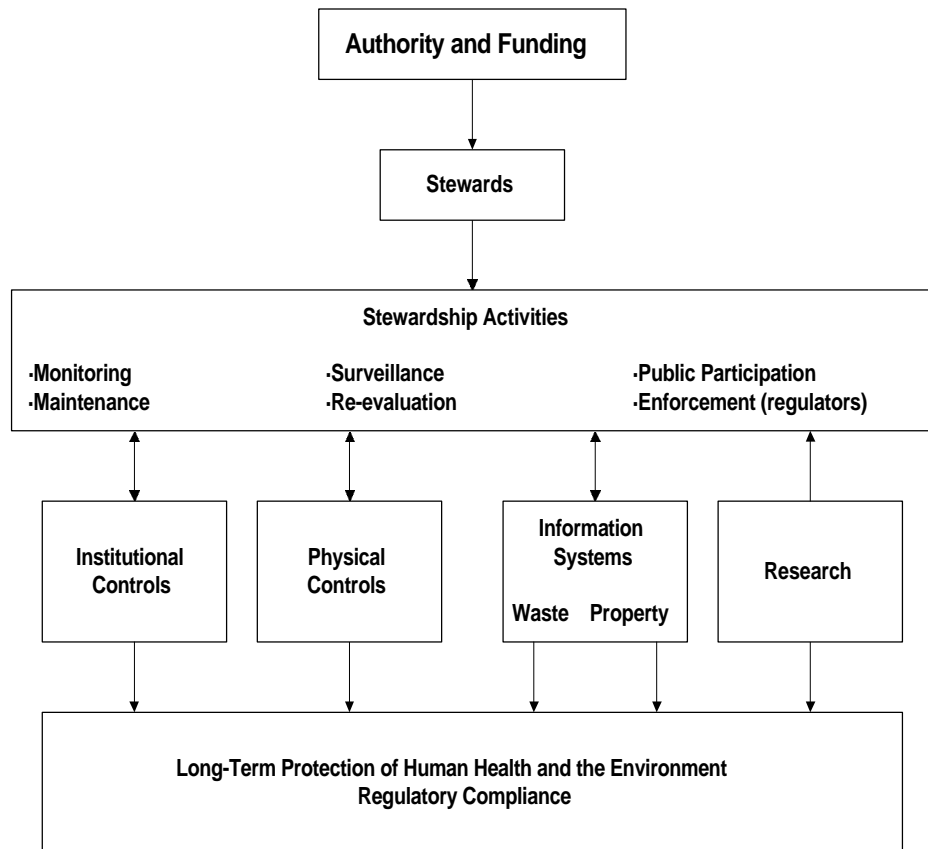
A conceptual model of a stewardship program is shown in [Figure 2-1](#) (adapted from ORRSC 1998). The LTSM Program at DOE-GJO fulfills some of these functions by using established systems and procedures. The following paragraphs describe implementation of functions that are not self-explanatory.

2.5.1 Public Participation

The LTSM Program follows applicable regulations and DOE orders and guidance that address public participation. The DOE-GJO contractor has developed a DOE-approved public participation plan for LTSM Program activities (Appendix E). Implementation of the program's public participation function is described in Section 3.3.

2.5.2 Records and Information Management

Records and information management is a critical function of any stewardship program. Essential site information must be safeguarded and kept accessible so custodians can maintain protectiveness for the lifetime of the site hazards and so the public can obtain pertinent site information.



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Figure 2-1. Stewardship Program Elements

LTSM Program records and information management activities are conducted in accordance with DOE-GJO approved records management plans. Records are stored in facilities that comply with requirements of the National Archives and Records Administration. Mission-critical electronic information and data are safeguarded from loss or damage. Public access to information is facilitated through maintaining the LTSM Program World Wide Web site (DOE 1999) and remote information repositories situated near disposal facilities.

The LTSM Program maintains information on historical site characterization, selection, engineering, construction, routine inspections and maintenance, real property, postclosure conditions, and remedial activities that have been conducted. The program generates annual reports for stakeholders and regulators as part of its information dissemination obligation.

2.5.3 Research and Technology Transfer

LTSM Program management personnel and specialists sponsor and participate in research and technology exchange and transfer programs. LTSM Program sites provide case histories of disposal cell design and performance. Developments in cover design and monitoring techniques are evaluated and incorporated as applicable. LTSM Program research results will be

incorporated into the next generation of RCRA disposal cell covers. Recent research and technology transfer activities are described in the program's annual report; the report and published technical papers are available on the program's World Wide Web site (DOE 1999).

2.5.4 Institutional Controls

Institutional controls are used at sites where contaminants have not been remediated to background or regulatory levels. These controls comprise a large portion of the protection strategy at LTSM Program sites.

Institutional controls are legally binding provisions that restrict access and limit exposure to contaminated materials. They complement physical controls to create a package of barriers to block exposure pathways and thus limit exposure to site contaminants. These controls usually are selected before remediation, in coordination with the agency that will have jurisdiction over control enforcement, so that health and environmental risks are acceptable at the restored site.

Typically, remediation is complete at a given site when it is transferred to the LTSM Program. Therefore, if institutional controls have been applied to that site as part of the selected restoration alternative, those controls are in place and have been determined to be effective at the time of site transfer.

The LTSM Program is essentially an institutional control; this program functions as a stewardship instrument funded by the Federal government to control exposures at low-level radioactive materials disposal sites. Site ownership is an institutional control because the site owner can control access. Most LTSM Program sites are owned by the Federal government. Other institutional controls may include zoning ordinances and ownership, deed restrictions, memoranda of understanding, and easements.

These controls must be monitored to ensure their continued effectiveness. Monitoring provides the mechanism for identifying, within the appropriate jurisdiction, where and when institutional controls are imposed; whether an effective enforcement mechanism exists; and whether the institutional controls have been violated. Enforcement of institutional controls is the responsibility of the local, tribal, State, or Federal agency identified in a specific institutional control to have jurisdiction. The LTSM Program will take corrective action whenever institutional controls are found to be ineffective.

CERCLA 5-year reviews include an evaluation of the effectiveness of institutional controls in maintaining protectiveness. Site-specific stewardship plans may also include a periodic evaluation of institutional controls.

2.6 LTSM Program Organization

Currently, DOE and its contractors perform the activities and fulfill the functions shown in Figure 2-1 except enforcement. That responsibility resides with the cognizant regulatory agencies (e.g., NRC, EPA, or the State).

At the present time, DOE-GJO uses contractor and subcontractor support for the maintenance, monitoring, operation, and reporting of its postclosure facilities and activities. A task order is negotiated annually with the prime contractor to conduct LTSM Program activities. The bases for the task order are the regulatory requirements, operations needs, physical controls, information systems, and administrative and research activities needed to implement the program. The program maintains a core group of postclosure experts; discipline-specific expertise is supplied through matrixed support (e.g., health physics, hydrology).

DOE currently has one program manager; support from other DOE staff is utilized as needed. Program planning anticipates an expanded Federal staff to accommodate increasing program scope (Figure 2-2).

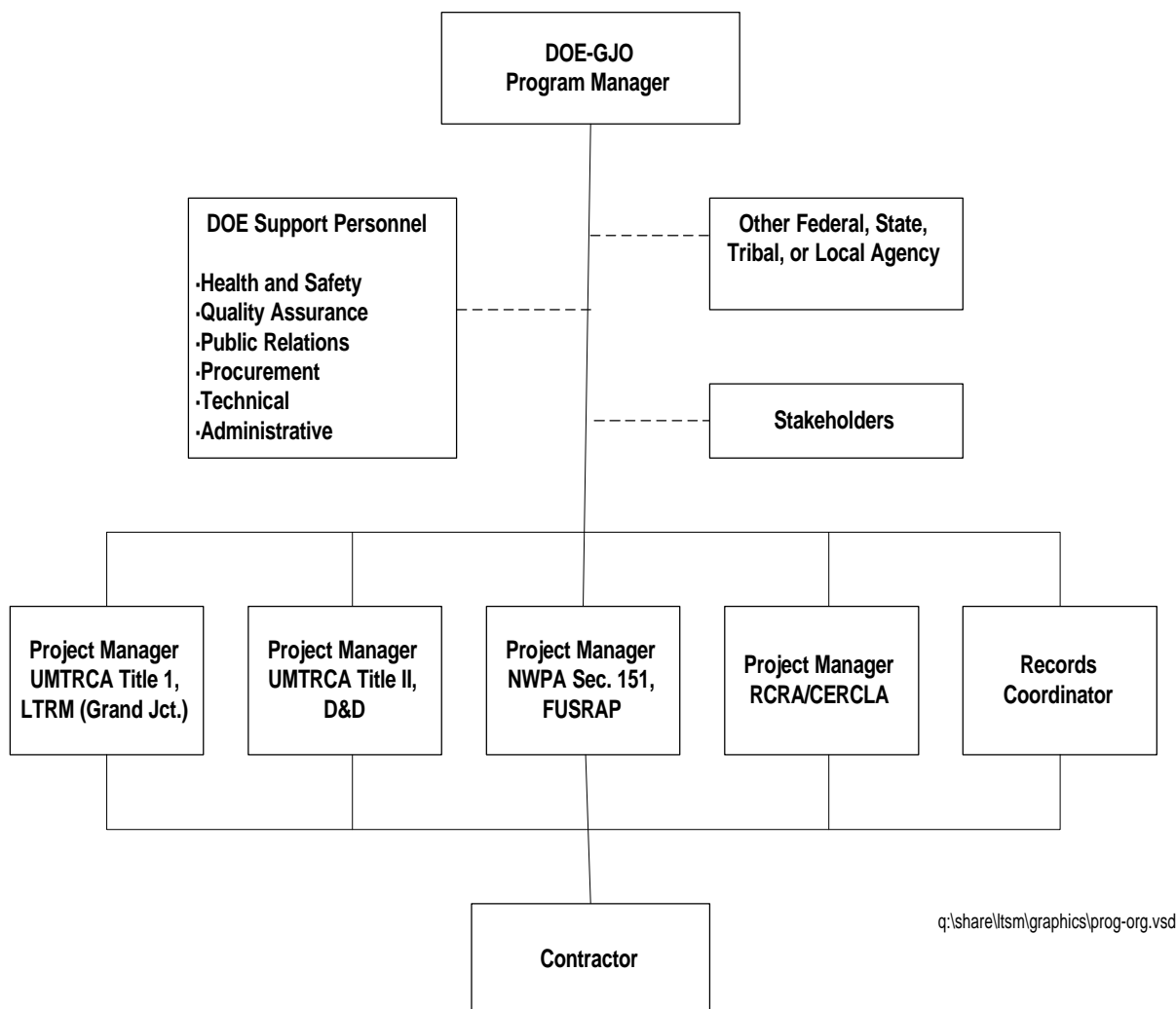


Figure 2-2. Anticipated LTSM Program Organization

In the future, stakeholder input and increasingly complex stewardship activities will continue to challenge the program to develop innovative and cost-effective approaches for conducting LTSM Program activities. The program must adhere to regulatory agreements and commitments made

in records of decision or other postclosure documents. These requirements may be met by using a variety of entities (stewards) through interagency agreements; other Federal agencies may support LTSM Program activities at some sites. Through the use of cooperative agreements, States, Native American tribes, or local governments could be involved with postclosure activities as well. Intergovernmental personnel agreements may allow “sharing” of an employee’s time to meet stewardship needs. For example, a portion of the salary for a local government employee may be funded by DOE to acquire personnel to fulfill LTSM responsibilities. DOE-GJO will work closely with the local community as a site comes to closure to establish a stewardship program that is cost effective and meets DOE’s and the community’s needs and expectations.

2.7 Authority and Funding

The budget authority and funding for the LTSM Program are provided by DOE-HQ and the DOE Albuquerque Operations Office.

LTSM Program funding is an element of the annual DOE environmental restoration budget request to the U.S. Congress. Under UMTRCA, DOE is required to provide stewardship services for Title I sites. DOE will probably provide these services for the Title II sites, also. Other sites must be monitored and maintained to protect the public and the environment as well as to comply with applicable public health and environmental protection regulations; the cost for these services is borne by DOE. The commercial owners of UMTRCA Title II and NWPA sites are required to make a one-time payment to the U.S. Treasury to defray the costs of stewardship; these funds are accessed through the normal congressional appropriations process.

Historical costs and projected funding are presented in Appendix C.

2.8 Responsibilities of Key Personnel and Organizations

Responsibilities of key personnel and organizations are summarized in [Table 2-3](#).

Table 2-3. *Personnel and Organization Roles or Responsibilities*

Key Personnel	Role/Responsibility
DOE-GJO Program Manager	Assign tasks; review and approve scope, schedule, and budget; evaluate regulatory and policy compliance; interface with regulators, stakeholders, and other DOE offices.
DOE-GJO Project Managers	Oversee operations of assigned sites.
Organization	
DOE-HQ	Provide funding and overall program guidance. Ensure alignment with national needs and objectives.
DOE-AL	Provide program funding, guidance, support, and oversight; authorize operations.
DOE-GJO	Plan, control, implement, and administer program. Ensure compliance with applicable regulations and guidance. Negotiate stakeholder agreements and provide interface with the public. Ensure timely and cost-effective performance of program activities.
Contractor	Provide technical and management staff to conduct program activities, as tasked by DOE.
NRC, EPA, other regulators	Provide program regulatory oversight; establish compliance and remediation standards.
Native American tribes/nations, states, and local government	Provide input to ensure alignment with government objectives and goals; implement and enforce institutional controls; ensure representation of local constituencies in decision-making process.
Other Stakeholders	Provide input to LTSM Program regarding local needs and desires; monitor stewardship activities.

3.0 LTSM Program Operations

3.1 Summary of LTSM Program Operations

Accomplishments for the most recent year are presented in the annual report on the LTSM Program World Wide Web site (DOE 1999).

3.1.1 Routine Operations

Sites under the stewardship of the LTSM Program are inactive and the impoundments were designed to protect human health and safety and the environment for at least one hundred years (UMTRCA regulations specify disposal cell designs to be effective for “up to one thousand years... [or] at least 200 years”). Consequently, most LTSM Program tasks at these sites are routine and are intended to ensure protectiveness and compliance. All routine tasks are conducted in accordance with approved plans and procedures.

Routine tasks are summarized below. Task assignments are presented for the present and for FY2002. Those tasks that will be conducted by DOE personnel are indicated with a “D”; the tasks assigned to the DOE contractor are indicated with a “C.”

<u>Task Description</u>	<u>Present</u>	<u>FY2002</u>
Administrative Tasks		
• Prepare budget and schedule, track performance, document activities	C	D
• Implement transfer of responsibilities for assigned sites to the LTSM Program (Appendix F)	D	D
• Manage operations and maintenance activities	C	D,C
• Maintain institutional controls	C	C
• Manage program and site-specific records	C	D
• Interface with technical, stakeholder, and regulatory communities	D,C	D
• Implement quality assurance/quality control activities	D,C	D
• Maintain emergency preparedness	D,C	D,C
Regulatory Tasks		
• Inspect each site and document the site condition	C	D,C
• Monitor groundwater, surface water, air, and other environmental media, as required	C	C
• Interface with regulators	D,C	D
• Conduct compliance monitoring	C	D,C
• Conduct CERCLA 5-year reviews	N/A	D
• Evaluate the effectiveness of institutional controls	C	D,C

<u>Task Description</u>	<u>Present</u>	<u>FY2002</u>
• Monitor impoundment performance and longevity	C	C
• Conduct risk assessments	C	C
• Conduct cover performance and other research; communicate results	C	C
• Conduct minor site maintenance, as required	C	D,C
• Operate the Long-Term Radon Management Project	C	D,C
• Implement reclamation or remedial action tasks	C	C
Stakeholder Tasks		
• Communicate pertinent information to stakeholders	D,C	D
• Respond to stakeholder needs and requests	D,C	D

3.1.2 Nonroutine Activities

Activities conducted once or on an as-needed basis are defined as nonroutine activities. Most nonroutine activities will increase as the LTSM Program grows. Other nonroutine activities will be conducted in response to changes in site conditions, regulatory setting, or management structure. The program will conduct a regulatory compliance review before implementing a nonroutine activity. Nonroutine activities may include the following:

- Seek out and incorporate innovative stewardship methods and technologies
- Review and modify, as necessary, administrative structures and systems in anticipation of program growth
- Establish improved structures to disseminate program information to the public and other stakeholders
- Respond to changes in site conditions that threaten site security or integrity
- Conduct remedial activities at sites
- Respond to changes in environmental regulations
- Respond to land use changes

Nonroutine activities that can be anticipated are addressed in task orders. Unanticipated tasks are planned and addressed by a task order modification. LTSM Program contingency plans, found in each site-specific Long-Term Surveillance Plan (LTSP), establish an emergency response framework that is invoked if necessary.

3.1.3 Out-Year Activities

By 2006, more than 50 sites are anticipated to be brought under the custody and care of the LTSM Program. Incorporation of these additional sites will result in increased variation of site settings and issues. The basic functions of the program will not change. However, environmental monitoring activity may increase, and the probability of postclosure remedial action may increase as additional sites are added to the program.

In accordance with stewardship requirements established by DOE and the applicable regulations for a given site, program personnel continually monitor regulatory compliance through site inspections and communication with regulators and stakeholders. Program personnel conduct site inspections, which may include physical inspection of surface impoundments, surveys, and environmental sampling and analysis. These methods are used to predict or detect out-of-compliance conditions. Such conditions will be reported to appropriate agencies and will be addressed in accordance with the approved contingency plans defined in the site-specific LTSPs. Effective stakeholder and regulator communication will ensure that program management is apprised of any changes in regulatory drivers. A typical site inspection checklist is presented in Appendix G.

As a standard operating procedure, regulatory compliance and the site protection strategy will be evaluated annually at the time of the site inspection or whenever a significant event occurs that potentially affects site integrity or security. This evaluation will include an assessment of the effectiveness of any site-specific institutional controls. Compliance also will be evaluated whenever any extraordinary occurrence is identified.

3.2 Waste Management and Material Disposition Activities

Anticipated program activities will not result in generation of any hazardous waste. Any disposal cell contents that are disturbed during site activities will be returned to the impoundment. If regulated waste is generated at an LTSM Program site, the waste will be properly disposed of at a permitted and licensed facility. This issue is addressed in site-specific activity plans.

3.3 Public Involvement Process

DOE encourages public participation, as directed by the Secretary of Energy (DOE 1994a). The LTSM Program Public Participation Plan describes how public participation is managed and incorporated into program activities and how the program will comply with all requirements for public participation and community right-to-know (Appendix E). This plan is updated as necessary.

The goals of public participation activities are to promote public awareness, understanding, and support of the program and to conduct public affairs and community relations activities that accurately identify public concerns. The LTSM Program encourages two-way communication between DOE-GJO and stakeholders by soliciting public and other stakeholder input as required for site operations activities and evaluation of institutional controls. The program responds to stakeholder input with current, complete, and accurate information.

The LTSM Program maintains several vehicles for facilitating public participation. Information is readily available on the program's World Wide Web site (DOE 1999), from local information repositories, or by calling program personnel.

4.0 LTSM Program Risk Analysis

Risks and risk reduction strategies have been identified for the LTSM Program. Risks were identified as either programmatic or site-specific.

Among long-term program risks is the uncertainty of whether some individual sites or sites from a given restoration program will be transferred to the LTSM Program. Because the owner or restoration agency implements a site transfer, the actual transfer schedule is uncertain. Transfer schedules may be affected by regulatory and administrative issues, such as license termination or indemnity. The state in which an UMTRCA Title II site is located may elect to become the long-term custodian of that site.

Site-specific risk reduction is achieved by monitoring trends and conducting corrective action before extraordinary events occur. Risk reduction is enhanced by adhering to the quality assurance program, following procedures for routine program activities, conducting periodic inspections and regulatory compliance reviews, communicating with affected parties, and planning for extraordinary situations.

[Table 4-1](#) presents the results of the LTSM Program risk analysis. The risks are ranked according to the permanence or the severity of the impact to either human health and the environment or to a Federal agency.

Table 4-1. Summary of LTSM Program Risks and Responses

Risk	Affected Portion of Program	Probability	Impact	Risk Reduction Response
Release of contaminated solids	Site	Low	Increased risk to public and environment, violation of Federal laws, potential contamination of soil and groundwater	The Grand Junction Office maintains an emergency response team that can be called upon to respond if necessary. The LTSM Program has established communication with local response agencies.
Release of contaminated leachate above thresholds	Site	Moderate	Increased risk to public and environment, violation of Federal laws, potential contamination of soil and groundwater	Where leachate collection systems have been installed, leachate accumulation levels are monitored. Conservative action points have been established. If leachate levels rise to the action points, leachate would be pumped and treated. Early warning point of compliance monitor wells are sampled at other sites where this is identified as a risk. Cover integrity is evaluated annually.
Public injury at site	Site	Low	Potential lawsuit, negative publicity	Sites are clearly marked and access is limited where necessary.
Failure of institutional controls	Site	Low, near-term; increases with time	Increased risk to local population and environment	A review of institutional controls is conducted at the time of the annual inspection and before conducting a nonroutine activity.
Records damage or loss	Program	Low	Loss of mission-critical active and historical records. Inability to respond to frequent requests for information	NARA-compliant records management system in place and operational.
Loss of funding	Program	Low	Site operations would scale down or cease, may incur fines or other penalties	Sites are designed to require only minimal surveillance and maintenance; they should remain protective for short periods of time. If funding is threatened for longer periods, Federal regulators can order DOE to resume work.
Degradation of containment systems	Site	Varies from low to high	Expense to re-evaluate containment system design and implement repair	Sites are inspected regularly for early warning of integrity reduction. The LTSM Program is notified of severe natural events or events that might threaten site integrity.
Vandalism to sites	Site	Moderate, high at some sites	Theft or damage to cover materials, possible release or exposure to contaminated materials	Passive security measures are evaluated annually and maintained as necessary. Ongoing vandalism may require upgrades to access controls or increased site presence.
Regulatory noncompliance	Program	Very low, but funding dependent	Noncompliance notification, potential negative publicity	A regulatory compliance review is conducted at the time of the annual inspection and before conducting a nonroutine activity.
Loss of key personnel	Program	Moderate	Short-term disruption of operations	Program operations are guided by approved plans. Records are maintained of site conditions and program activities.

5.0 LTSM Program Strategies

The overall implementation strategy for the LTSM Program is to use a consistent, risk-based, and compliance-driven approach to conduct program operations.

The strategies presented in this section were developed from an analysis of internal and external factors, including available funding, assigned scope, an assessment of site status and needs, and an appraisal of public and other stakeholder input. Specific strategies have been included in approved plans (Appendix A). Program implementation strategies are predicated on the assumptions summarized below.

5.1 Key Assumptions

Key assumptions for the LTSM Program are divided into two categories: institutional and environmental protection/regulatory compliance.

Institutional Assumptions

- Adequate funding will be provided to carry out the LTSM Program mission.
- Native American tribes/nations, States, the public, regulators, and the U.S. Congress are program stakeholders and influence program policy and conduct.
- As program stakeholders, communities near the LTSM Program sites expect no unacceptable risks from the contaminated materials.
- DOE will negotiate institutional controls to protect the public and the environment; will entrust implementation of those controls only to governmental agencies with the resources to manage and enforce them; and will periodically monitor the effectiveness of institutional controls.
- DOE will seek public participation in the development of required compliance strategies.
- Tribal, State, and local agencies will continue to take an active role in monitoring site compliance and may become actively involved in supporting stewardship operations.
- Local changes in land use will not affect the siting or configuration of LTSM Program sites.
- Waste disposal capacity will be available, if needed.

Environmental Protection/Regulatory Compliance Assumptions

- Applicable regulatory drivers have been identified, and the program will achieve and maintain full compliance with those laws and regulations.
- The program will stay informed of changes to pertinent regulations and will revise program procedures as necessary.
- The sites are stable and protective of the environment, and they will remain so for the foreseeable future.
- Surveillance and monitoring activities will identify degradation of site containment systems and the potential for contaminant release.

5.2 Environmental Protection and Regulatory Compliance Strategies

The regulatory agencies with oversight responsibility for individual sites are identified in Table 2-2. States and Native American tribes and nations also have authority over various aspects of program activities. The LTSM Program will work closely with all regulators to ensure that program activities result in continued safety and compliance with applicable regulations.

Goal: Allow no exposure to hazardous materials in excess of regulatory limits.

Strategies:

- Continue periodic inspections.
- Conduct monitoring, as appropriate, to ensure “early warning” detection of contaminant release.
- Maintain contingency plans for emergency response.
- Periodically evaluate the effectiveness of institutional controls.

Goal: Eliminate hazards to workers, the public, and the environment at all sites.

Strategies:

- Monitor the effectiveness of institutional controls.
- Maintain all sites in a safe, protective condition.
- Maintain contacts with local public safety agencies and national seismic and weather monitoring agencies.
- Maintain and comply with a safety and health program in accordance with DOE policy.

Goal: Maintain full compliance with applicable laws, regulations, guidance, and DOE policy.

Strategies:

- Inspect each site regularly.
- Prepare an inspection report for each site; submit report to regulators, as required.
- Evaluate site regulatory compliance at least annually or when nonroutine activities are conducted.
- Maintain effective communication with regulators.
- Maintain and comply with a quality assurance program in accordance with DOE policy.

- Goal: Ensure that site records are complete and protected.
- Strategies:
- Maintain a records archive and tracking system.
 - Obtain sufficient resources to manage records.
 - Develop a Geographic Information System and other database systems for managing site data.
- Goal: Seek improvements in containment systems and stewardship methods.
- Strategies:
- Support research and development of stewardship-related work.
 - Create or participate in information exchange opportunities.
 - Evaluate program activities for improvement opportunities.
- Goal: Complete postclosure restoration activities, as necessary.
- Strategies:
- Operate the Grand Junction, Colorado, Disposal Cell in support of the Long-Term Radon Management Project.
 - Operate groundwater restoration programs.

5.3 Program Administration Strategies

- Goal: Administer the program in an efficient and cost-effective manner.
- Strategies:
- Continue to identify cost-savings opportunities.
 - Maintain institutional knowledge and consistency through effective contractor transitions; maintain and provide access to complete, descriptive records and plans.
 - Maintain program plans and guidance.

5.4 Public Involvement Strategies

- Goal: Keep the public informed of program activities or changes at the sites, and involve the public in decision-making activities.
- Strategies:
- Respond quickly and appropriately to requests for information.
 - Maintain an information repository and program reference center on the World Wide Web.
 - Maintain local site information repositories.
 - Publish a report of program activities for the previous year.
 - Conduct stewardship workshops and other information distribution activities.

6.0 LTSM Program Cost and Schedule Control

6.1 Cost and Schedule Controls

The Project Control System for projects assigned to DOE-GJO is based on the application of DOE Order 430.1, "Life Cycle Assets Management."² A graded approach for the use of this document is applied to each program based on the relative risk and complexity of the project. The Project Control System is made up of the basic components of technical, schedule, and cost baseline management.

6.1.1 Technical Baseline

Technical baseline development involves identifying the management actions that are necessary to formally establish the project mission and functional objectives; to obtain necessary information; and to define, plan, and control the scope of work.

The technical baseline is established in such a way that work can be managed and monitored, and that work performance can be measured. The technical baseline can be modified only through formal change control. The technical work scope is defined at different work breakdown structure levels, depending on project risk.

6.1.2 Schedule Baseline

Schedule control is maintained through the development of a life-cycle schedule baseline for any given project. The schedule baseline depicts all major activities and milestones associated with a project. This schedule is formally agreed to by the DOE-GJO LTSM Program manager and the operating contractor. A project's progress is measured against the approved schedule baseline.

The schedule is developed on an electronic network processor by using critical path methodologies that allow for a detailed analysis of a project's progress, provide early warning of possible problem areas, and provide "what-if" capabilities for problem mitigation. The schedule, shown in either a logic network or a Gantt chart format, graphically depicts the integrated relationships of the project activities. The schedule also ties directly to other project documents such as the work breakdown structure, the statement of work, the technical baseline, and the cost baseline. No changes can be made to the schedule baseline without formal documentation and approval.

6.1.3 Cost Baseline

Cost control is maintained through the use of a DOE-validated Project Control System and the "earned value" concept of performance measurement. The project budget is also formally agreed to by the DOE-GJO LTSM Program manager and the operating contractor.

²The current contract for Technical Assistance and Remediation at DOE-GJO is implemented in accordance with DOE Order 4700.1, as stated in that contract.

Fiscal-year and life-cycle cost baselines are directly integrated with the schedule, the work breakdown structure, and the technical baseline. They are developed by using the schedule baseline as the guideline for planning task expenditures. Actual costs incurred are compared to performance on a monthly basis, and the resulting variances are analyzed by the project team to determine what corrective actions may be required. No changes can be made to the cost baseline without formal documentation and approval.

6.2 Project Baseline Summary

DOE Office of Environmental Restoration planning guidance directs environmental restoration project managers to generate a project baseline summary that identifies the nature, extent, and cost of current and expected project scope.

The LTSM Program compiles the technical, schedule, and cost baseline into a project baseline summary. This summary information is input into the annual DOE budgeting process and long-range plan, *Accelerating Cleanup: Paths to Closure* (DOE 1998a). The project baseline summary describes the current status of the site or activity, the status in 2006, and the anticipated end state. It also reconciles current year planning with previous estimates and evaluates hazards to the projected baselines.

Managers of DOE environmental restoration projects are encouraged to develop a stewardship project baseline summary, to the extent possible, early in the site restoration process. The intent is for restoration projects to consider and plan for long-term stewardship activities for sites that will not be released for unrestricted use. This planning will assist the site transition from restoration to stewardship phases.

6.3 Schedule

Anticipated program growth is presented in Table 2-1.

7.0 References

Oak Ridge Reservation Stewardship Committee (ORRSC), 1998. Stakeholder Report on Stewardship, Oak Ridge Reservation End Use Working Group, http://www.ornl.gov/doe_oro/em/emhome.html, July.

U.S. Department of Energy (DOE), 1988. "Disposal Site Long-Term Surveillance and Maintenance," memorandum from John E. Baublitz, Acting Director, Office of Remedial Action and Waste Technology, Office of Nuclear Energy, to Don Ofte, Manager, Idaho Operations Office, November 30.

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———, 1994a. *Guidance for Implementation of the Department's Public Participation Policy*, memorandum from the Secretary of Energy, U.S. Department of Energy, Washington, D.C. [This implements DOE Policy P 1210.1]

———, 1994b. "National Environmental Policy Act Categorical Exclusion Determinations—AL Projects Processed for the Period Ending August 5, 1994," memorandum from Bruce G. Twining, Manager, DOE-AL to J. R. Lampley, Manager, DOE-GJPO, August 12

———, 1996. "Long-Term Maintenance of Offsite EM-40 Disposal Sites," memorandum from J. M. Owendoff, Deputy Assistant Secretary for Environmental Restoration, to R. Nace, et al., June 14.

———, 1998a. *Accelerating Cleanup: Paths to Closure*, DOE/EM-0362, Washington, D.C., June.

———, 1998b. "Transfer of Completed Sites to the Grand Junction Office Long-Term Surveillance and Maintenance Program," memorandum from J. M. Owendoff, Acting Assistant Secretary for Environmental Management, to distribution, August 31.

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U.S. Environmental Protection Agency (EPA), 1989. *Groundwater Protection Standards for Inactive Uranium Tailings Sites (40 CFR 192)*, Background Information for Final Rule, EPA 520/1-88-023, U.S. Department of Energy, Washington, D.C., March.

Code of Federal Regulations

10 CFR 40, "Domestic Licensing of Source Material," U.S. Nuclear Regulatory Commission.

10 CFR 835, "Occupational Radiation Protection," U.S. Department of Energy.

40 CFR 192, "Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings," U.S. Environmental Protection Agency.

40 CFR 261, "Identification and Listing of Hazardous Waste," U.S. Environmental Protection Agency.

40 CFR 300, "National Oil and Hazardous Substances Pollution Contingency Plan," U.S. Environmental Protection Agency.

Appendix A

LTSM Program Plans and Guidance

LTSM Program Plans and Guidance

The following comprises the primary planning information and guidance for the LTSM Program. Many of these documents invoke additional guidance by reference. Some items have been annotated to help the reader locate specific program information.

Health and Safety

GJO Health and Safety Standards Manual (Manual GJO-2).

GJO Site Radiological Control Manual (Manual GJO-3).

DOE Order 5400.5, "Radiation Protection of the Public and the Environment."

DOE contractor *Cheney Disposal Cell Health and Safety Plan* (Manual MAC-LTRM 7.0).

Quality Assurance

LTSM Quality Assurance Program Plan (MAC-2152) [cites applicable guidance and regulations, establishes procedures to ensure that program activities comply with applicable regulations and policy, and identifies plans and procedures to which the program will adhere].

GJO Quality Assurance Standards (Manual GJO-1).

DOE Order 5700.6C, "Quality Assurance."

Operations and Maintenance

Long-Term Surveillance Plans (specific to each site) [establish site-specific operating procedures and summarize pertinent site data].

NRC Review of Previously Approved Reclamation Plans, July 14, 1995 [documents final site condition for selected UMTRCA Title II sites].

Site Completion Reports (or equivalent) [document site conditions when environmental restoration activities are complete and site responsibility is transferred to the LTSM Program].

LTSM Program, Long-Term Radon Management for the Cheney Disposal Cell, Operations and Maintenance Plan (in preparation).

Monticello Mill Tailings Site, Monticello Vicinity Properties Long-Term Surveillance and Maintenance Plan for Supplemental Standards Locations, GJO-96-10TAR, November 1996.

GJO Training Manual (Manual GJO-4).

DOE contractor *Environmental Compliance Manual* (Manual MAC-1001).

Environmental Monitoring

GJO Environmental Procedures Catalog (Manual GJO-6).

Work plans [developed for activities exceeding a threshold scope].

Administration

Guidance for Implementing the Long-Term Surveillance and Monitoring Program for UMTRCA Title I and Title II Disposal Sites (draft, September 1998) [establishes procedures for generating long-term surveillance plans for UMTRCA Title I and Title II sites to ensure compliance with 10 CFR 40.27 and 10 CFR 40.28. This guidance is applicable to sites remediated under other programs].

Budget submittals

Contractor task orders

Annual Surveillance and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title I Disposal Sites [required report to NRC per 10 CFR 40.27].

Annual Surveillance and Monitoring Report for Uranium Mill Tailings Radiation Control Act Title II Disposal Sites [required report to NRC per 10 CFR 40.28].

LTSM Program Public Participation Plan (see Appendix E).

DOE contractor *General Administrative Procedures Manual* (Manual MAC-1000).

DOE contractor *Project Control System Manual* (Manual MAC-1002).

DOE contractor *Formality of Operations Manual* (Manual MAC-1003).

DOE contractor *Field Assessment Procedures Manual* (Manual MAC-3000).

DOE contractor *Engineering Process Planning Guidelines* (Manual MAC-3002).

DOE contractor *Procurement Manual* (Manual MAC-3010).

Pinellas Plant Environmental Restoration Program Transition Plan, July 10, 1997.

Transition Plan for the Transfer of Long-Term Surveillance and Monitoring Responsibilities from DOE-CH to DOE-GJO for Site A and Plot M Sites, Argonne, Illinois; Piqua Site, Ohio; and Hallam Site, Nebraska, October 1997.

Records Management

LTSM Program working file index [establishes the framework for all LTSM Program records; the index is used in conjunction with the DOE contractor's *General Administrative Procedures Manual* (Manual MAC-1000), Section 3.0, "Records Management Procedure"].

DOE Order 1324.5B, "Records Management Program."

DOE Order 200.1, "Information Management Program."

Appendix B

Applicable Laws and Regulations

Applicable Laws and Regulations

The following list incorporates the major laws, regulations, and guidance that must be followed by the LTSM Program at various sites. A complete assessment of applicable drivers is contained in the specific plans and guidance presented in Appendix A.

Atomic Energy Act of 1954, 42 U.S.C. 2011, *et seq.*

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 [Superfund], 42 U.S.C. 9601, *et seq.*

“General License for Custody and Long-Term Care of Residual Radioactive Material Disposal Sites,” 10 CFR 40.27 [UMTRCA Title I sites]

“General License for Custody and Long-term Care of Uranium and Thorium Byproduct Material Disposal Sites,” 10 CFR 40.28 [UMTRCA Title II sites]

“Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings,” 40 CFR 192

“Licensing Requirements for Land Disposal of Radioactive Waste,” 10 CFR 61

National Environmental Policy Act of 1969, 42 U.S.C. 4321, *et seq.*

Nuclear Waste Policy Act of 1982, 42 U.S.C. 101719(c) *et seq.*, Section 151

“Occupational Safety and Health Act Standards,” 29 CFR 1910, as applicable

“Records Management,” 36 CFR 1220 through 1234, National Archives and Records Administration

“Long-Term Site Surveillance,” 10 CFR 40, Appendix A, Criterion 12

“Reporting Requirements,” 10 CFR 40.60

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, *et seq.*

“Safety and Health Regulations for Construction,” 29 CFR 1926, as applicable

Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. 7901, *et seq.*

Uranium Mill Tailings Remedial Action Amendments Act of 1988, Public Law 100-616

Uranium Mill Tailings Radiation Control Act Extension Act of 1996, HR 2067

Appendix C

LTSM Program Funding

Table C-1. Historical LTSM Program Costs

Period (FY)	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Cost (\$K)	183	320	417	610	739	962	954	926 ¹	666 ²	1,265

¹11-month period due to contract change.

²Task order accounting procedures implemented.

Table C-2. Projected LTSM Program Funding

Period (FY)	1999	2000	2001	2002	2003	2004	2005	2006
Budget (\$K) ¹	2,659	2,794	7,088	11,500	13,200	15,200	17,500	17,500

¹Source: Included in the "Grand Junction Office, Other Programs" totals presented in *Accelerating Cleanup: Paths to Closure* (DOE 1998a)

Appendix D

LTSM Program Sites

LTSM Program Sites

Currently, the LTSM Program provides stewardship services for 25 sites (Figures D-1 through D-3). These sites contain permanent storage and isolation facilities for low-level radioactive materials. Information about specific LTSM Program sites is available at <http://www.doegjpo.com/programs/ltsm/> (DOE 1999).

D.1 Environmental Setting

The varied environmental settings of LTSM Program sites are summarized in Table D-1.

D.2 Current Use of Sites and Adjacent Land

Generally, sites currently administered by the LTSM Program have been withdrawn from development or public use for the foreseeable future. The primary purpose of the sites is to control long-lived, low-level radioactive contaminants. Limited use of some sites for agriculture or recreation is allowed. Access to most sites is restricted. The Federal Government holds title to the UMTRCA sites except those on tribal lands. Some sites (e.g., the Hallam, Nebraska, site—see Figure D-3) are owned by commercial entities. DOE administers the lands for which the



Figure D-3. LTSM Program Sites Remediated under Other Programs

site title is held by the Federal Government. As a quick reference, Table D-1 summarizes climatic conditions and the current land uses of the area surrounding these sites.

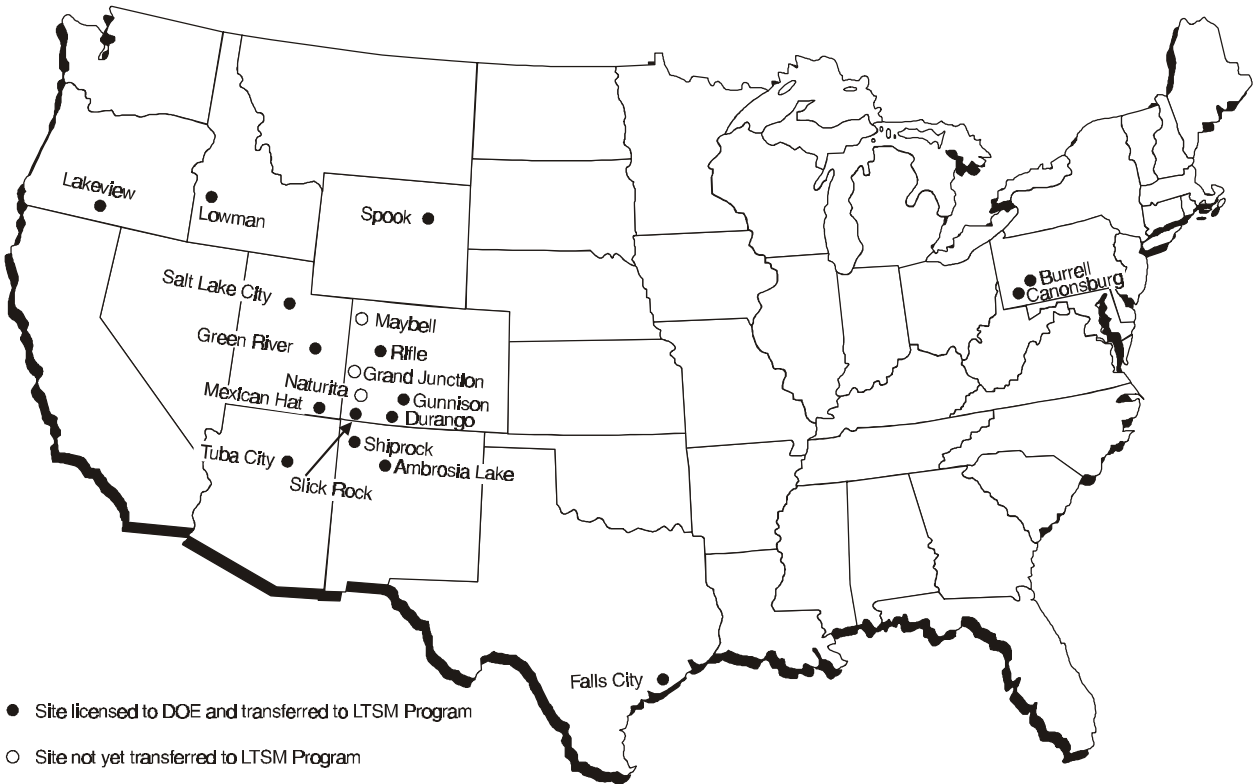


Figure D-1. LTSM Program Sites Remediated under UMTRCA Title I

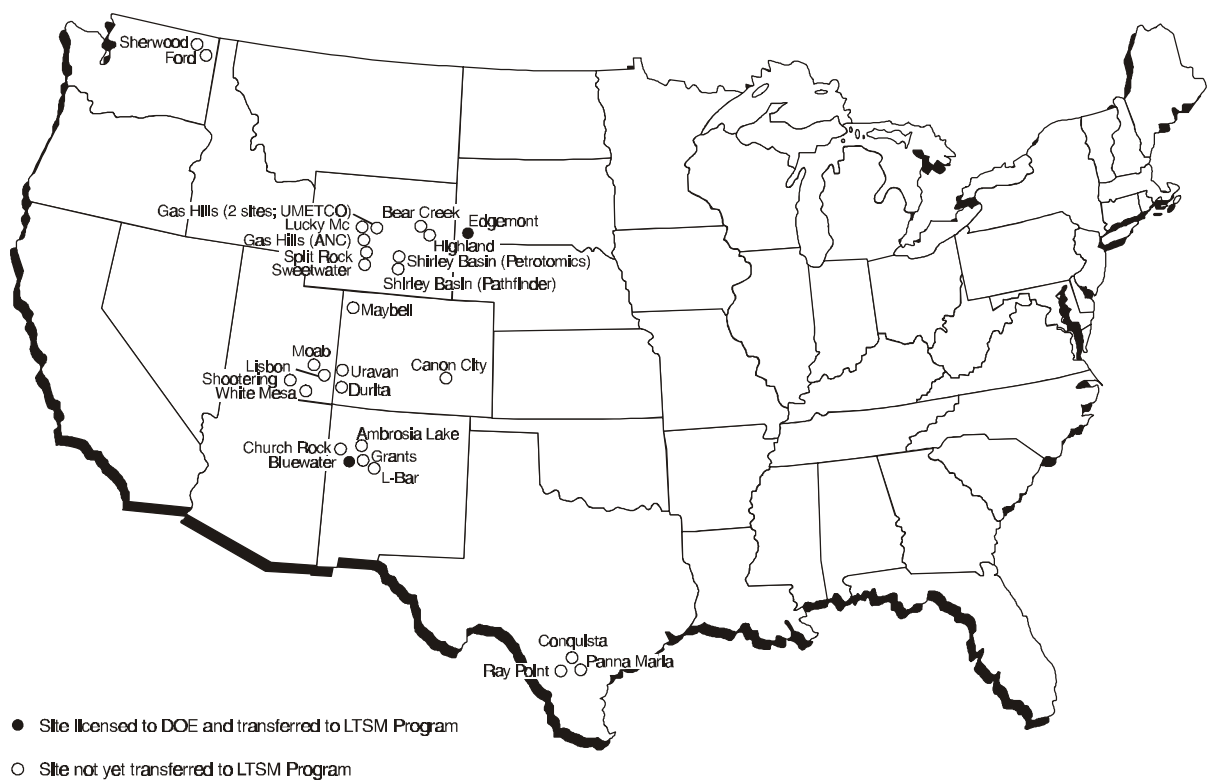


Figure D-2. LTSM Program Sites Remediated under UMTRCA Title II

Table D-1. will be provided upon request. Click [Wendee Ryan](#) or [Michelle Smith](#) to request.

D.3 Future Uses of Land and Improvements

Land use or ownership at current LTSM Program sites will not change for the foreseeable future. Some sites may be used for research.

Adjacent land use will certainly change with time. Risks posed by those changes will be addressed as they are anticipated.

Site improvements include those structures necessary to contain contaminated materials, control access, and identify site boundaries. These improvements are permanent and will be maintained to function as designed for the foreseeable future.

Appendix E

LTSM Program Public Participation Plan

LTSM Program Public Participation Plan

The Long-Term Surveillance and Maintenance (LTSM) Program, managed by the U. S. Department of Energy (DOE) Grand Junction Office (GJO) in Grand Junction, Colorado, conducts stewardship activities for 25 sites. For each site, the LTSM Program ensures that the on-site contaminated materials remain isolated from the environment, that the safety of the public and the environment is maintained, and that all applicable regulations are met. Program scientists, engineers, and specialists conduct inspections, provide maintenance, perform research, and archive records.

DOE has a responsibility to care for these sites to ensure that the public has no concern about harm from these stored materials. These Community Relations Objectives and Public Involvement Activities were developed by DOE and comply with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), administrative record and public participation requirements, as amended by the Superfund Amendments and Reauthorization Act (SARA); the National Oil and Hazardous Substances Pollution Contingency Plan (NCP); and the U. S. Environmental Protection Agency (EPA) and DOE guidance on public participation and administrative records.

Community Relations Objectives

These objectives are based on the issues and information needs previously identified in this document.

- Continue to coordinate activities and communicate with other agencies involved with the LTSM Program and the individual sites to ensure that appropriate parties are kept informed and are part of the review process.
- Provide key local and State officials with technical information and status of DOE activities.
- Keep the general public informed of activities, risk, and progress of activities associated with the LTSM Program site.
- Provide a process for receiving and responding to questions from citizens in a timely manner.

Stakeholders

- Citizens of host counties
- Native American communities
- Local media
- Local county government
- Local city governments
- State government agencies
- Congressional delegation
- Elected host State officials
- Federal agencies
- Environmental organizations
- Business owners
- Service organizations

Public Involvement Activities

This section outlines the DOE's public involvement strategies developed to address community concerns.

1. Briefings for Local Officials and Key Business Groups

Provide briefings on project issues to local officials and key business groups through regular telephone calls or meetings.

Targeted Groups: Local city and county government, state agencies, congressional delegations, elected State officials, business owners.

Timing: As needed or requested by targeted groups.

2. Briefings for Native Americans

DOE will communicate either by telephone or through meetings to inform tribal representatives of DOE activities and allow for two-way communication. Information materials will be provided to tribal representatives for presentation at community meetings, if requested. Information materials will be translated upon request.

Targeted groups: Affected Native American communities

Timing: As needed or requested.

3. Small Group Meetings

Stakeholders may request DOE staff to meet with small groups of citizens. These meetings allow DOE to receive first-hand information from interested citizens.

Targeted groups: All stakeholders.

Timing: As needed or requested by stakeholders.

4. Fact Sheets, Information Updates, and Technical Summaries

Fact sheets, information updates, and technical summaries have been prepared for public distribution to keep the community informed of the status and issues associated with cleanup actions.

Targeted groups: All stakeholders

Timing: As needed or requested.

5. Public Availability Sessions

Public availability sessions will be held as needed or requested to answer community members' questions in an informal setting.

Targeted groups: All stakeholders

Timing: As needed or requested.

6. Public Meetings

Unless a public meeting is required, availability sessions will be held in place of public meetings to allow for more informal discussion with stakeholders.

Targeted groups: All stakeholders

Timing: As required.

7. News Releases

General information will be provided to the public through news releases supplied to the local media for significant events. Media representatives will be invited to public meetings.

Targeted groups: All stakeholders

Timing: As needed.

8. Mailing Lists

Key contacts on the master mailing list will be sent copies of reports, updates, and fact sheets. The master list is updated as information changes or as new or additional information requests are received. This list will be used for community-wide distribution of information materials.

Targeted groups: All stakeholders

Timing: Monthly updating and maintenance.

9. Information Repository/Administrative Record

DOE will maintain and update information related to the LTSM Program. The repository is located at the DOE Grand Junction Office in Grand Junction, Colorado. Local repositories are maintained near sites. Information in the repository is updated as activities progress.

Targeted groups: All stakeholders

Timing: Ongoing.

10. Internet Webpage

A website providing information on the overall program as well as site-specific information has been created to allow the public to view up-to-date information on the LTSM Program. The LTSM Program website address is <http://www.doegjpo.com/programs/ltsm>.

Targeted groups: All stakeholders

Timing: Ongoing

11. Information Contact

The DOE LTSM Program manager, with the assistance of the DOE public affairs specialist, responds directly to public inquiries. The DOE public affairs specialist will serve as the primary information contact for program issues affecting the community at large. This includes issuance of fact sheets and news releases, as well as coordination of availability sessions and public meetings.

Targeted groups: All stakeholders

Timing: Ongoing.

12. Toll-Free Number

DOE has established a toll-free telephone number. The number is 1-800-399-5618 and connects directly with the Department of Energy in Grand Junction. Citizens with questions, comments, or concerns should call the toll-free number.

Targeted groups: All stakeholders

Timing: Ongoing

13. Miscellaneous Activities

In some cases, the previous point-of-contact for the transferred LTSM site may have created additional public participation/involvement activities not mentioned in this listing. All efforts will be made to continue these activities.

Targeted groups: Various stakeholders

Timing: Unknown

Appendix F

Site Transfer Procedure

F.1 Site Acceptance Criteria

A remediated or reclaimed site will be transferred to the LTSM Program if environmental restoration activities are complete. Typically, the site will not have an ongoing DOE mission and the site will not be part of a larger DOE facility; however, as the need for stewardship services grows, sites that do not meet these criteria may be cared for by the LTSM Program. Under certain circumstances, non-DOE facilities may be transferred to DOE for long-term care, provided the owner funds all future inspections and anticipated maintenance and DOE concurs in site closure. For UMTRCA sites, title for the land is transferred to DOE or the host State (except on tribal lands), and the land typically is withdrawn from public access. For sites owned by other entities, site access is restricted through other institutional controls.

A site may be accepted into the LTSM Program when the following criteria are met, where applicable:

- Remedial action and environmental restoration activities are complete, with regulator concurrence
- Adequate site documentation is received at the program records repository
- Any stipulated funds for long-term surveillance and maintenance are on deposit in the U.S. Treasury
- LTSM Program personnel inspect the site and document that the contained contaminated materials are controlled and that no hazard exists to the public or the environment
- A long-term surveillance plan has been developed
- All regulatory issues have been resolved
- DOE obtains a clear title to the land and permanent access
- DOE receives a list of site stakeholders

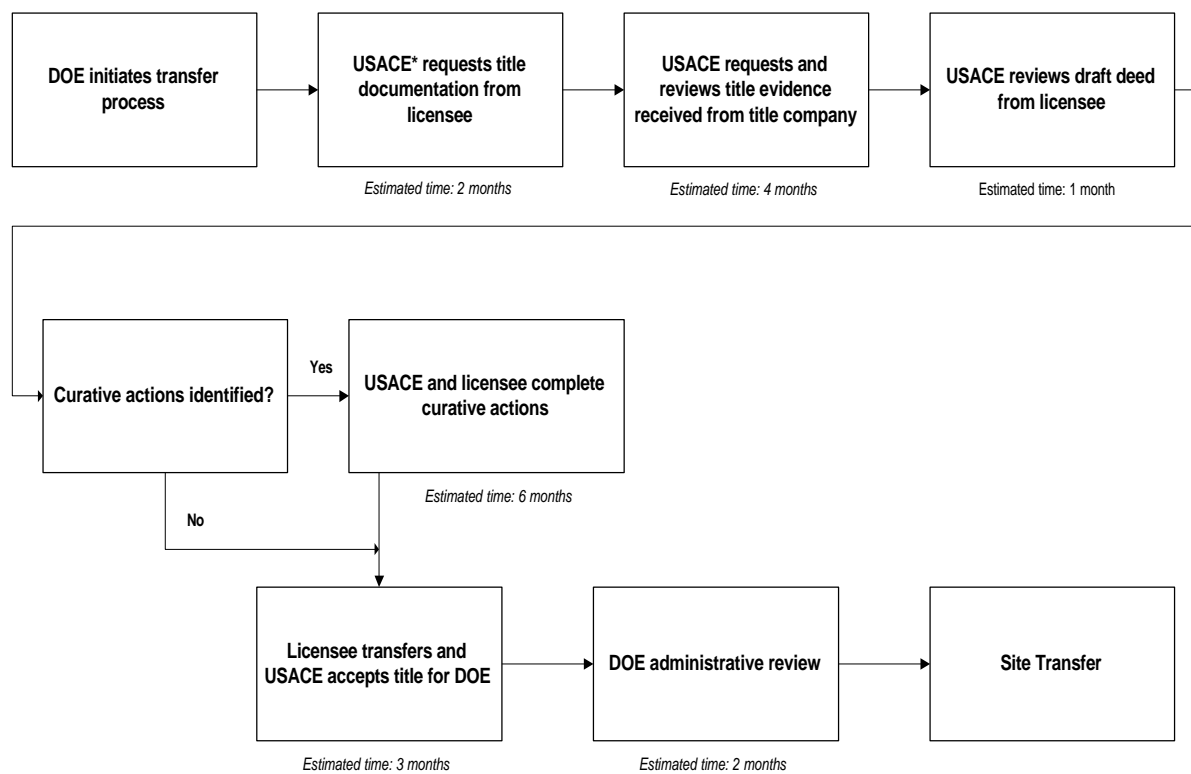
F.2 Site Transfer Process

UMTRCA Title I specified that site transfer may proceed upon approval of a long-term surveillance plan, concurrence by NRC that remediation or reclamation was complete, receipt of required site records, and presentation of a clear title. UMTRCA Title II sites require the additional steps of termination of the commercial owner's NRC license and payment of a surveillance and maintenance fee by the former licensee. All UMTRCA sites are accepted under a general NRC license for long-term care.

DOE may assume title and custody of remediated sites under the authority of NWPA; these sites must satisfy essentially the same transfer criteria as UMTRCA Title II sites. NWPA sites are not licensed for long-term care, and DOE stewardship activities are self-regulated.

The LTSM Program may assume stewardship responsibility for DOE sites remediated under FUSRAP, D&D, CERCLA, RCRA, and other projects or authorities. The site transfer process for these sites will be modeled after existing site transfers. The process will be set forth in an approved transition plan. Transition plans contain a list of tasks required to complete site transfer, identification of responsible parties, schedule of activities, and a signature page. Transition plans were developed to transfer responsibility for the Pinellas, Florida, Plant, and three D&D sites to the LTSM Program (DOE 1997a and 1997b). For all site transfers, DOE will obtain a list of stakeholders and keep them informed throughout the transfer process.

The process to transfer title for an UMTRCA Title II site to the LTSM Program is shown on [Figure F-1](#).



*On behalf of DOE

USACE = U.S. Army Corps of Engineers

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Figure F-1. Title Transfer Process

Appendix G

Site Inspection Checklist

SITE STATUS REPORT (CHECKLIST)
and JOB SAFETY ANALYSIS
for
GRAND JUNCTION

Status of Site Inspections

Last Update of Status Report:	March 30, 1999
Last Annual Inspection:	September 25, 1998
Inspectors:	Gardner (Chief) and Jacobson
Next Annual Inspection:	Week of April 19, 1999
Last Follow-Up Inspection:	None
Next Follow-Up Inspection:	None

Issues and Issue Resolution

1. The inspection is to focus on that part of the site that is closed, as if the Grand Junction site were a completed disposal site. In practice, inspectors will notice and take into account the open cell and such things as temporary buildings and equipment that are used by the LTRM Project.

Put another way, the annual inspection required by the Interim LTSP does not include the open cell. GRJ is the only site to have an interim LTSP.

Mostly because of the open cell, this site is “busy.” To deal with this problem, several features were assigned names, e.g., northern stormwater collection ditch. These names may not be in the LTSP. See the drawing in the 1998 inspection report.

Resolution: Last year’s inspection report handled the complexity well. This year’s inspectors can use the same wording if it makes sense to do so.

2. Specific site surveillance features.

All specific site-surveillance features are believed to be undisturbed and in good condition. See Table 1.

Resolution: Re-inspect.

3. Access road has buckles, ruts, and potholes.

Resolution: Re-inspect. If maintenance is required, it may be an LTRM project. Perimeter signs consist of temporary “Controlled Area” and “No Trespassing” signs hung side by side on the barbed wire fence. The yellow signs are deteriorating.

Last year's recommendation was to replace the temporary signs with standard perimeter signs.

A standard entrance sign was installed at the entrance gate after last year's inspection. GJO decided against placing an entrance sign at the Highway 50 access gate so as not to attract curiosity visits.

Resolution: The decision to replace the perimeter signs has not been finalized.

5. Five monitor wells.

Three are on site and monitored.

A large casing(?) sticks out of the ground west of MW-732.

Resolution: Inspect only the three on-site wells.

6. Plant encroachment.

Plant encroachment was noted last year on the SE part of the top of the disposal cell.

Resolution: Re-inspect.

7. Animal burrows.

Guideline: Burrowing is a concern if inspectors have reason to suspect the animals are bringing tailings to the surface. Inspectors should review the cross section on the Fact Sheet. Burrowing around the edge of the disposal cell is probably not a concern unless a large amount of dirt is kicked out of the burrows. Burrowing on top of the disposal cell, on the other hand, might indicate a more serious problem and should be carefully investigated.

Resolution: Re-inspect.

8. Erosion.

Southern Diversion Channel: OK

Northern Stormwater Collection Ditch:

1. Filling with sediment and weeds.
2. Erosion was noted west of the perimeter fence where the northern stormwater collection ditch ends.

Southern Stormwater Collection Ditch: The southern stormwater collection ditch and the short ditch that flows south into the northern stormwater retention pond are choked with sediment and vegetation.

Northern Stormwater Retention Pond: High water marks near the top of the berm indicate that the pond may overflow following a heavy rain.

Stockpile Areas:

1. Erosion was noted along the eastern edge of the Mancos Shale stockpile and in the perimeter road that parallels the eastern perimeter fence.
2. Stormwater collects in small ponds around several of the stock piles and along the road east of the southeastern diversion channel.

Former Overpass at Highway 50: Erosion was noted on 2 to 3 acres on the east side ramp area where the Highway 50 overpass used to be.

Resolution: Re-inspect

Table 1. Specific Site Surveillance Features at Grand Junction, Colorado, Disposal Site

Identifier	Feature	Notes
–	Access gate	At Highway 50
–	Access Road	Highway to site
–	Entrance gate	
–	Entrance sign	At entrance gate
–	Perimeter signs	75
SMK–1	Site Marker 1	Not installed
SMK–2	Site Marker 2	Not installed
BM–1	Boundary Monument 1	Newly installed
BM–2	Boundary Monument 2	Same
BM–3	Boundary Monument 3	Same
BM–4	Boundary Monument 4	Same
MW–731	Monitor Well 731	LTSM Network
MW–732	Monitor Well 732	LTSM Network
MW–733	Monitor Well 733	LTSM Network (SW corner of open cell)

LTSM Job Safety Analysis

Site Grand Junction, Colorado		JSA Number GRJ-99-1	
Task Annual Site Inspection			
Prepared by C. A. Jones	Date 03/30/99	Reviewed by	Date
Site Hazards -Large area of rough, irregular riprap -Rapid changes in weather conditions. Precipitation and wind possible. Consult forecast. -Site is exposed: No shelter from sun, wind, cold or wet weather.			
Protective Clothing Required/Suggested -Sturdy boots with ankle support are required -Personal clothing appropriate to the season and forecast suggested.			
Protective Equipment Required/Suggested -Drinking water -Personal items such as sunscreen, sunglasses, insect repellent -First-aid kit			
Subcontractor Industrial Health and Safety Plan N/A			
Medical & Emergency Service Information General emergency services 911 -- operational county wide Fire 911 -- operational county wide Mesa County Sheriff 911 or (970) 242-6707 non-emergency crime or incident			